

WHAT IS CLAIMED IS:

1. An integrated type gas-insulated switching apparatus comprising:

5 a plurality of switching devices each including a contact and an insulated container in which the contact is contained, said contact comprising electrodes adapted to be contacted with each other and separated therefrom, said insulated container filling with an insulating gas;

10 a conductive container to which the plurality of switching devices are connected, respectively; and

an insulated structure supporting the conductive container.

15 2. The integrated type gas-insulated switching apparatus according to claim 1, wherein each of said contacts is disconnectably connected to the conductive container, and each of said insulated containers is removably attached to the conductive container.

20 3. The integrated type gas-insulated switching apparatus according to claim 1, further comprising a driving unit housed in the conductive container and operatively connected to at least one of the electrodes of each of the contacts, said driving mechanism being adapted to drive the  
25 at least one of the electrodes so as to make open the electrodes or to make close them.

30 4. The integrated type gas-insulated switching apparatus according to claim 3, further comprising an insulated control member housed in the insulated structure and the conductive container and linked to the driving

mechanism, said insulated control member being adapted to control the drive of the driving mechanism.

5        5.        The integrated type gas-insulated switching apparatus according to claim 1, wherein said plurality of switching devices include two switching devices of a same type and one switching device of a different type.

10       6.       The integrated type gas-insulated switching apparatus according to claim 5, wherein said insulated containers of the two switching devices of the same type keep gastight to form different gas compartments, respectively, said different gas compartments being separated from the conductive container, and wherein said insulated container of the one switching device of the different type forms a same gas compartment as that of the conductive container and that of the insulated structure.

15       7.       The integrated type gas-insulated switching apparatus according to claim 5, wherein said three switching devices are arranged in line, and one of said two switching devices of the same type is located in a middle of the three switching devices.

20       8.       The integrated type gas-insulated switching apparatus according to claim 1, wherein said plurality of switching devices are only two switching devices of different types.

25       9.       The integrated type gas-insulated switching apparatus according to claim 8, wherein said contact of the one of the two switching devices is a disconnecting contact

contained in the insulated container thereof, said insulated container keeps gastight to form a gas compartment separated from the conductive container, and wherein said insulated container of the other of two switching devices forms a same  
5 gas compartment as that of the conductive container and that of the insulated structure.

10. The integrated type gas-insulated switching apparatus according to claim 8, wherein said plurality of  
10 switching devices are only two switching devices of a same type.

11. The integrated type gas-insulated switching apparatus according to claim 10, wherein said insulated  
15 container of at least one of said two switching devices keeps gastight to form a gas compartment separated from the conductive container.

12. The integrated type gas-insulated switching apparatus according to claim 8, wherein said contact of the  
20 one of the two switching devices is a disconnecting contact contained in the insulated container thereof, said contact of the other of the two switching devices is a breaker contact contained in the insulated container thereof, and wherein  
25 said other of the two switching devices has a terminal which is connected via a conducting member to the conductive container.

13. The integrated type gas-insulated switching apparatus according to claim 4, wherein said insulated  
30 structure is arranged vertically, and said insulated control member is adapted to move vertically in the conductive

container so as to control the driving mechanism, further comprising a supporting member provided in at least one of the conductive container and the insulated structure and supporting the insulated control member so as to guide the vertical movement thereof.

14. The integrated type gas-insulated switching apparatus according to claim 1, further comprising means for changing the conductive container to a grounded state or a nongrounded state.

15. The integrated type gas-insulated switching apparatus according to claim 14, wherein at least one of said switching devices is a disconnecting switch.

16. The integrated type gas-insulated switching apparatus according to claim 14, wherein at least one of said switching devices is a circuit breaker.

17. The integrated type gas-insulated switching apparatus according to claim 14, wherein said changing means comprises a stationary electrode and a movable electrode adapted to be contacted with the stationary electrode and separated therefrom, said stationary electrode being fixed to the conductive container, said insulated structure being supported to an insulated base portion, said movable electrode being slidably conductively provided for the base portion.

18. The integrated type gas-insulated switching apparatus according to claim 17, wherein said movable

electrode is arranged to an outside of the insulated structure.

19. The integrated type gas-insulated switching apparatus according to claim 17, wherein, when the conductive container is changed to the nongrounded state, a part of said movable electrode is permitted to be contained in the base portion.

20. The integrated type gas-insulated switching apparatus according to claim 17, wherein said changing means comprises a slide portion for supporting the movable electrode to be slidable, a sealing member provided between the sliding member and the movable electrode and adapted to keep watertight therebetween and a drainage member mounted on an upper side of the slide portion and adapted to drain water.

21. The integrated type gas-insulated switching apparatus according to claim 17, wherein said movable electrode and stationary electrode are provided inside of the insulated structure.

22. The integrated type gas-insulated switching apparatus according to claim 14, wherein said changing means comprises a stationary electrode and a movable electrode adapted to be contacted with the stationary electrode and separated therefrom, said stationary electrode being fixed to the conductive container, said insulated structure being supported to an insulated base portion, said movable electrode having one end rotatably conductively supported to the base portion.

23. An integrated type gas-insulated switching apparatus comprising:

a plurality of switching devices each including a contact and an insulated container in which the contact is contained, said contact comprising electrodes adapted to be contacted with each other and separated therefrom, said insulated container filling with an insulating gas;

a conductive container filling with an insulating gas, to which the plurality of switching devices are connected, respectively;

an insulated structure supporting the conductive container;

a partition wall provided between at least one of the switching devices and the conductive container so as to form a first gas compartment in the at least one of the switching devices and a second gas compartment in the conductive container; and

means disposed to the partition wall and adapted to cause the insulating gas to flow in a forward direction from one of the first and second gas compartments toward other thereof and not to flow in opposite direction to the forward direction.

24. The integrated type gas-insulated switching apparatus according to claim 23, further comprising means for shutting off the insulating gas flow in the forward direction when the gas pressure differential between the first and second gas compartments increases so that the amount of gas flowing in the forward direction becomes large.

25. The integrated type gas-insulated switching apparatus according to claim 23, further comprising filter

means provided along a path of the insulating gas flowing in the forward direction and adapted to filter gases and particles in the insulating gas, said gases being different from the used insulating gas.

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26. The integrated type gas-insulated switching apparatus according to claim 23, wherein the forward direction of the gas flow is a direction directed from one of the first and second gas compartments whose one end is the ground potential toward other thereof where there is no ground potential.

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27. The integrated type gas-insulated switching apparatus according to claim 23, further comprising means for monitoring a gas pressure in one of the first and second compartments where one end is the ground potential.

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28. An integrated type gas-insulated switching apparatus comprising:

a plurality of switching devices each including a contact and an insulated container in which the contact is contained, said contact comprising electrodes adapted to be contacted with each other and separated therefrom, said insulated container filling with an insulating gas;

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a conductive container to which the plurality of switching devices are connected, respectively;

an insulated structure supporting the conductive container; and

means for forming in the insulated containers of the switching devices separated gas compartments, respectively;

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at least one of said gas compartments being a common gas compartment of the conductive container and the insulated structure.

5           29.     The integrated type gas-insulated switching apparatus according to claim 28, further comprising an insulated pipe member and a gas density monitoring unit for monitoring a gas density in the insulated pipe member, one end of insulated pipe member being connected to the at least  
10 one of the separated gas compartments, other end of which running through an inside of the insulated structure so that the other end of the pipe member is guided inside of the base portion so as to be connected to the gas density monitoring unit.